DOCUMENT RESUME

ED 455 385 CE 082 000

AUTHOR Heinrich, Janet

TITLE Nursing Workforce: Emerging Nurse Shortages Due to Multiple

Factors. Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives.

INSTITUTION General Accounting Office, Washington, DC.

REPORT NO GAO-01-944 PUB DATE 2001-07-00

NOTE 19p.; For related reports on the Nursing Workforce, see CE

081 941 and CE 082 009.

AVAILABLE FROM U.S. General Accounting Office, P.O. Box 37050, Washington,

DC 20013 (first copy free; additional copies \$2 each). For

full text: http://www.gao.gov/archive/2001/d01944.pdf.

PUB TYPE Reports - Evaluative (142) EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Career Education; *Demand Occupations; Employee Attitudes;

Employer Employee Relationship; Employment Patterns;
*Employment Projections; Futures (of Society); Government
Role; Higher Education; *Job Satisfaction; *Labor Needs;
Labor Supply; *Labor Turnover; *Nurses; Nursing Education;

Postsecondary Education; Work Environment

ABSTRACT

Current evidence suggests emerging shortages of nurses available or willing to fill some vacant positions in hospitals, nursing homes, and home care. Total employment of registered nurses (RNs) per capita and the national unemployment rate for RNs have declined, and providers from around the country report growing difficulty recruiting and retaining the number of nurses needed in a range of settings. Current problems with the recruitment and retention of nurses are related to multiple factors. The nurse work force is aging, and fewer new nurses are entering the profession to replace those who are retiring or leaving. Nurses report unhappiness with these aspects of the work environment: staffing levels, heavy workloads, increased use of overtime, lack of sufficient support staff, and adequate wages. In many cases, this growing dissatisfaction affects decisions to remain in nursing. A serious shortage of nurses is expected in the future as pressures are exerted on demand and supply. Demand is expected to increase dramatically when the baby boomers reach their 60s, 70s, and beyond. During the same period, the number of women aged 25-54, who have traditionally formed the core of the nurse work force, is expected to remain relatively unchanged. Efforts to improve the workplace environment may both reduce the likelihood of nurses leaving the field and encourage more young people to enter the nursing profession. (YLB)



GAO

Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives

July 2001

NURSING WORKFORCE

Emerging Nurse Shortages Due to **Multiple Factors**

U.S. DEPARTMENT OF EDUCATION Office of Educational Research and Improvement EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.







GAO-01-944

Contents

Letter		1
	Results in Brief	1
	Background	2
	Evidence Suggests Emerging Shortages of Nurses	3
•	Multiple Obstacles to Increasing Supply of Nurses	6
	Demand for Nurses Will Continue to Grow As the Supply Dwindles	11
	Concluding Observations	13
Appendix I Change in RN Employment, per 100,000 Popula State, 1996-2000		
Figures		
	Figure 1: Age Distribution of the Registered Nurse Population, 1980 and 2000	8
	Figure 2: Cumulative Annual Increase in Median RN Earnings and	0
	the Consumer Price Index, 1989-2000	11
	Figure 3: Decline in Elderly Support Ratio Expected, 2000 to 2040	12





United States General Accounting Office Washington, DC 20548

July 10, 2001

The Honorable Nancy L. Johnson Chairman Subcommittee on Health Committee on Ways and Means House of Representatives

Dear Madam Chairman:

The health and long-term care systems in the United States rely heavily on the services of nurses, the largest group of health care providers. Recent media reports and other accounts have raised concerns about the adequacy of both the current and projected supply of nurses to meet the nation's needs. Over the last few months, several congressional hearings have been held on this issue, including two at which we testified on nurse recruitment and retention problems.¹

In response to your request, we are providing information on (1) whether there is evidence of a current nursing shortage, (2) the reasons for current nurse recruitment and retention problems, and (3) what is known about the projected future supply of and demand for nurses. To provide information on the nurse workforce, we relied primarily on published reports and data from the Department of Health and Human Services' (HHS) Health Resources and Services Administration (HRSA) and the Department of Labor's Bureau of Labor Statistics (BLS). We also reviewed the relevant professional and research literature and interviewed industry and professional association representatives, researchers, union officials, and other experts. We performed our work during May and June 2001 in accordance with generally accepted government auditing standards.

Results in Brief

National data are not adequate to describe the nature and extent of nurse workforce shortages, nor are data sufficiently sensitive or current to compare nurse workforce availability across states, specialties, or provider types. Nonetheless, current evidence suggests emerging



¹See Nursing Workforce: Recruitment and Retention of Nurses and Nurse Aides Is a Growing Concern (GAO-01-750T, May 17, 2001) and Nursing Workforce: Multiple Factors Create Nurse Recruitment and Retention Problems (GAO-01-912T, June 27, 2001).

shortages of nurses available or willing to fill some vacant positions in hospitals, nursing homes, and home care. The number of employed registered nurses (RN) per capita has declined in recent years while the national unemployment rate for RNs has declined to 1 percent in 2000. In addition, providers from around the country are reporting growing difficulty recruiting nurses to work in a range of settings, and surveys of providers in several states and localities indicate rising RN vacancy rates. Furthermore, there has been an increase in public sector activities related to nurse workforce issues in many states.

While shortages emerge because of an imbalance of demand and supply, there are insufficient data to measure how each may be affecting the current situation. The multiple factors that affect recruitment and retention problems include the aging of the nurse workforce resulting from reduced entry of younger people into the profession as well as nurses' job dissatisfaction. Sources of dissatisfaction include working conditions such as inadequate staffing, heavy workloads, the increased use of overtime, a lack of sufficient support staff, and the adequacy of wages. A serious shortage of nurses is expected in the future as demographic pressures influence both demand and supply. The future demand for nurses is expected to increase dramatically as the baby boomers reach their 60s, 70s, and beyond. Moreover, the nurse workforce will continue to age, and, by 2010, approximately 40 percent will likely be older than 50.

Background

Registered nurses are responsible for a large portion of the health care provided in this country. RNs make up the largest group of health care providers, and, historically, have worked predominantly in hospitals; in 2000, 59.1 percent of RNs were employed in hospital settings. A smaller number of RNs work in other settings such as ambulatory care, home health care, and nursing homes. Their responsibilities may include providing direct patient care in a hospital or a home health care setting, managing and directing complex nursing care in an intensive care unit, or supervising the provision of long-term care in a nursing home. Individuals usually select one of three ways to become an RN—through a 2-year associate degree, 3-year diploma, or 4-year baccalaureate degree program.



Once they have completed their education, RNs are subject to state licensing requirements.²

The U.S. healthcare system has changed significantly over the past 2 decades, affecting the environment in which nurses provide care. Advances in technology and greater emphasis on cost-effectiveness have led to changes in the structure, organization, and delivery of health care services. While hospitals traditionally were the primary providers of acute care, advances in technology, along with cost controls, shifted care from traditional inpatient settings to ambulatory or community-based settings, nursing facilities, or home health care settings. The number of hospital beds staffed declined as did the patient lengths of stay. While the number of hospital admissions declined from the mid-1980s to the mid-1990s, they increased between 1995 and 1999. At the same time, the overall acuity level of the patients increased as the conditions of those patients remaining in hospitals made them too medically complex to be cared for in another setting. The transfer of less acute patients to nursing homes and community-based care settings created additional job opportunities and increased demand for nurses.

Evidence Suggests Emerging Shortages of Nurses

Current evidence suggests emerging shortages of nurses available or willing to fill some vacant positions in hospitals, nursing homes, and home care. Some localities are experiencing greater difficulty than others. National data are not adequate to describe the nature and extent of these potential nurse workforce shortages, nor are data sufficiently sensitive or current to allow a comparison of the adequacy of the nurse workforce size across states, specialties, or provider types. However, total employment of RNs per capita and the national unemployment rate for RNs have declined, and providers from around the country are reporting growing difficulty recruiting and retaining the number of nurses needed in a range of settings. Another indicator that suggests the emergence of shortages is a rise in recent public sector efforts related to nurse workforce issues in many states.

The national unemployment rate for RNs is at its lowest level in more than a decade, continuing to decline from 1.5 percent in 1997 to 1.0 percent in



²Licensed practical nurses (LPN) make up the second-largest group of licensed health care givers, accounting for 23 percent of the nurse workforce. LPNs primarily provide direct patient care under the direction of a physician or RN. Unless otherwise specified, our discussion of nurse workforce issues in this report generally refers only to RNs.

2000. At the same time, total employment of RNs per capita declined 2 percent between 1996 and 2000, reversing steady increases since 1980. Between 1980 and 1996, the number of employed RNs per capita nationwide increased by 44 percent. At the state level, changes in per capita nurse employment from 1996 to 2000 varied widely, from a 16.2 percent increase in Louisiana to a 19.5 percent decrease in Alaska. (See appendix I.) Overall a decline in per capita nurse employment occurred in 26 states and the District of Columbia between 1996 and 2000. Declining RN employment per capita may be an indicator of a potential shortage. It is an imprecise measure, however, because it does not account for changes in care needs of the population or how many nurses relative to other personnel providers wish to use to meet those needs. Moreover, total employment includes not only nurses engaged in clinical or patient care activities but also those in administrative and other nondirect care positions. Data on how much nurse employment may have shifted between direct care and other positions are not available.

Recent studies suggest that hospitals and other health care providers in many areas of the country are experiencing greater difficulty in recruiting RNs.³ For example, a recent survey in Maryland conducted by the Association of Maryland Hospitals and Health Systems reported a statewide average vacancy rate for hospitals of 14.7 percent in 2000, up from 3.3 percent in 1997. The association reported that the last time vacancy rates were at this level was during the late 1980s, during the last reported nurse shortage. A survey of providers in Vermont found that hospitals had an RN vacancy rate of 7.8 percent in 2001, up from 4.8 percent in 2000 and 1.2 percent in 1996. For 2000, California reported an average RN vacancy rate of 20 percent, and for 2001, Florida reported nearly 16 percent and Nevada reported an average rate of 13 percent.

Concerns about retaining nurses have also become more widespread. A recent survey reported that the national turnover rate among hospital staff nurses was 15 percent in 1999, up from 12 percent in 1996.⁴ Another industry survey showed turnover rates for overall hospital nursing



³Caution must be used when comparing vacancy rates from different studies. While nurse vacancy rates are typically the number of budgeted full-time RN positions that are unfilled divided by the total number of budgeted full-time RN positions, not all studies identify the method used to calculate rates.

⁴The Nursing Executive Center, *The Nurse Perspective: Drivers of Nurse Job Satisfaction and Turnover* (Washington, D.C.: The Advisory Board Company, 2000).

department staff rising from 11.7 percent in 1998 to 26.2 percent in 2000.⁶ Nursing home and home health care industry surveys indicate that nurse turnover is an issue for them as well.⁶ In 1997, an American Health Care Association survey of 13 nursing home chains identified a 51-percent turnover rate for RNs and LPNs.⁷ A 2000 national survey of home health care agencies reported a 21-percent turnover rate for RNs.⁸

Increased attention by state governments is another indicator of concern about nurse workforce problems. According to the National Conference of State Legislatures, as of June 2001, legislation to address nurse shortage issues had been introduced in 15 states, and legislation to restrict the use of mandatory overtime for nurses in hospitals and other health care facilities had been introduced in 10 states. A variety of nurse workforce task forces and commissions have recently been established as well. For example, in May 2000, legislation in Maryland created the Statewide Commission on the Crisis in Nursing to determine the current extent and long-term implications of the growing shortage of nurses in the state.

Available data on supply and demand for RNs are not adequate to determine the magnitude of any current imbalance between the two with any degree of precision. Both the demand for and supply of RNs are influenced by many factors. Demand for RNs not only depends on the care needs of the population, but also on how providers—hospitals, nursing homes, clinics, and others—decide to use nurses in delivering care. Providers have changed staffing patterns in the past, employing fewer or more nurses relative to other workers such as nurse aides. For example, following the introduction of the Medicare Prospective Payment System (PPS), hospitals increased the share of RNs in their workforces. However, in the early 1990s, in an effort to contain costs, acute care facilities restructured and redesigned staffing patterns, introducing more non-RN caregivers and reducing the percentage of RNs. While the number of RNs



⁶Hospital and Healthcare Compensation Service, *Hospital Salary and Benefits Report, 2000-2001* (Oakland, N.J.: Hospital & Healthcare Compensation Service, 2000).

⁶Like vacancy rates, caution must be used when comparing turnover rates from different studies. While nurse turnover rates are typically the number of nurses that have left a facility divided by the total number of nurse positions, there is no standard method for calculating turnover, and methods used in different studies vary.

⁷American Health Care Association, Facts and Trends 1999, The Nursing Facility Sourcebook (Washington, D.C.: AHCA, 1999).

⁸Homecare Salary and Benefits Report, 2000-2001, 2000.

employed by hospitals remained relatively unchanged from 1995 to 1997, hospitals reported significant growth in RN employment in 1998 and 1999.

Supply depends on the size of the pool of qualified persons and the share of them willing to work. Current participation by licensed nurses in the work force is relatively high. Nationally, 81.7 percent of licensed RNs were employed in nursing in 2000.9 Although this represents a slight decline from the high of 82.7 percent reported in 1992 and 1996, this rate of workforce participation remains higher than the 76.6 to 80.0 percent rates reported in the 1980s. Moreover, some RNs are employed in nonclinical settings, such as insurance companies, reducing the number of nurses available to provide direct patient care.

Multiple Obstacles to Increasing Supply of Nurses

Current problems with the recruitment and retention of nurses are related to multiple factors. The nurse workforce is aging, and fewer new nurses are entering the profession to replace those who are retiring or leaving. Furthermore, nurses report unhappiness with many aspects of the work environment including staffing levels, heavy workloads, increased use of overtime, lack of sufficient support staff, and adequate wages. In many cases this growing dissatisfaction is affecting their decisions to remain in nursing.

Nurse Workforce Is Aging

The decline in younger people, predominantly women, choosing nursing as a career has resulted in a steadily aging RN workforce. Over the last 2 decades, as opportunities for women outside of nursing have expanded the number of young women entering the RN workforce has declined. A recent study reported that women graduating from high school in the 1990s were 35 percent less likely to become RNs than women who graduated in the 1970s. Reductions in nursing program enrollments within the last decade attest to this narrowing pipeline. According to a 1999 Nursing Executive Center Report, between 1993 and 1996, enrollment



⁹In 2000, workforce participation rates by RNs vary across states, from a high of 92 percent in North Dakota and Louisiana to a low of 75 percent in Pennsylvania and 76 percent in Virginia, Indiana, and Arizona.

¹⁰Peter I. Buerhaus, Douglas O. Staiger, and David I. Auerbach, "Implications of an Aging Registered Nurse Workforce," *JAMA*, Vol. 283, No. 22 (June 14, 2000).

¹¹Peter I. Buerhaus, Douglas O. Staiger, and David I. Auerbach, "Policy Responses to an Aging Registered Nurse Workforce," Nursing Economic\$, Vol. 18, No. 6 (Nov.-Dec. 2000).

in diploma programs dropped 42 percent and enrollment in associate degree programs declined 11 percent. Furthermore, between 1995 and 1998, enrollment in baccalaureate programs declined 19 percent, and enrollment in master's programs decreased 4 percent. ¹² The number of individuals passing the national RN licensing exam declined from 97,679 in 1996 to 74,787 in 2000, a decline of 23 percent.

The large numbers of RNs that entered the labor force in the 1970s are now over the age of 40 and are not being replenished by younger RNs. Between 1983 and 1998, the number of RNs in the workforce under 30 fell by 41 percent, compared to only a 1-percent decline in the number under age 30 in the rest of the U.S. workforce. Over the past 2 decades, the nurse workforce's average age has climbed steadily. While over half of all RNs were reported to be under age 40 in 1980, fewer than one in three were younger than 40 in 2000. As shown in figure 1, the age distribution of RNs has shifted dramatically upward. The percent of nurses under age 30 decreased from 26 percent in 1980 to 9 percent 2000, while the percent age 40 to 49 grew from 20 to 35 percent.



¹²In addition to the lack of students entering and graduating from nursing programs, there is concern about a pending shortage of nurse educators. The average age of professors in nursing programs is 52- and 49 for associate professors.

¹³ Policy Responses to an Aging Registered Nurse Workforce," Nursing Economic\$.

Figure 1: Age Distribution of the Registered Nurse Population, 1980 and 2000

35 Percent

30

25

20

15

10

40-49

50-59

>=60

Age distribution

1980

2000

Source: HRSA, The Registered Nurse Population: National Sample Survey of Registered Nurses, March 2000.

Job Dissatisfaction Cited As a Major Factor

Job dissatisfaction has also been identified as a major factor contributing to the current problems of recruiting and retaining nurses. A recent Federation of Nurses and Health Professionals (FNHP) survey found that half of the currently employed RNs who were surveyed had considered leaving the patient-care field for reasons other than retirement over the past 2 years. Over one-fourth (28 percent) of RNs responding to a 1999 survey by The Nursing Executive Center described themselves as somewhat or very dissatisfied with their jobs, and about half (51 percent) were less or much less satisfied with their jobs than they were 2 years



¹⁴Federation of Nurses and Health Professionals, *The Nurse Shortage: Perspectives from Current Direct Care Nurses and Former Direct Care Nurses* (opinion research study conducted by Peter D. Hart Research Associates)(Washington, D.C.: 2001).

ago. ¹⁶ In that same survey, 32 percent of general medical/surgical RNs, who constitute the bulk of hospital RNs, indicated that they were dissatisfied with their current jobs. According to a survey conducted by the American Nurses Association, 54.8 percent of RNs and LPNs responding would not recommend the nursing profession as a career for their children or friends, while 23 percent would actively discourage someone close to them from entering the profession. ¹⁶

Inadequate staffing, heavy workloads, and the increased use of overtime are frequently cited as key areas of job dissatisfaction among nurses. According to the recent FNHP survey, of those RNs responding who had considered leaving the patient-care field for reasons other than retirement over the past 2 years, 56 percent indicated that they wanted a less stressful and less physically demanding job. 17 The same survey found that 55 percent of current RNs were either just somewhat or not satisfied by their facility's staffing levels, while 43 percent of current RNs surveyed indicated that increased staffing would do the most to improve their jobs. Another survey found that 36 percent of RNs in their current job more than 1 year were very or somewhat dissatisfied with the intensity of their work. 18 Some providers report increased use of overtime for employees. Twenty-two percent of nurses responding to the FNHP survey said they were concerned about schedules and hours. A survey of North Carolina hospitals conducted in 2000 found significant reliance on overtime for staff nurses. Nine percent of rural hospitals reported spending more than 25 percent of their nursing budget on overtime, and, among urban hospitals, 49 percent expected to increase their use of overtime in the coming year. 19 The trend toward increasing use of overtime is currently a major concern of nurse unions and associations.



¹⁶The Nurse Perspective: Drivers of Nurse Job Satisfaction and Turnover, 2000.

¹⁶American Nurses Association, Analysis of American Nurses Association Staffing Survey (Internet survey of self-selected participants compiled by Cornerstone Communications Group for the American Nurses Association)(Warwick, R.I., 2001).

¹⁷The Nurse Shortage: Perspectives from Current Direct Care Nurses and Former Direct Care Nurses, April 2001.

¹⁸The Nurse Perspective: Drivers of Nurse Job Satisfaction and Turnover, 2000.

¹⁹North Carolina Center for Nursing, *Nursing Shortage Areas in North Carolina Hospitals* (February 2001).

Nurses have also expressed dissatisfaction with a decrease in the amount of support staff available to them over the past few years. More than half the RNs responding to the recent study by the American Hospital Association (AHA) did not feel that their hospitals provided adequate support services. RNs, LPNs, and others responding to a survey by the ANA also pointed to a decrease of needed support services. Current nurse workforce issues are part of a larger health care workforce shortage that includes a shortage of nurse aides. 21

Some nurses have also expressed dissatisfaction with their wages. While surveys indicate that increased wages might encourage nurses to stay at their jobs, money is not always cited as the primary reason for job dissatisfaction. According to the FNHP survey, of those RNs responding who had considered leaving the patient-care field for reasons other than retirement over the past 2 years, 18 percent wanted more money, versus 56 percent who were concerned about the stress and physical demands of the job. However, the same study reported that 27 percent of current RNs responding cited higher wages or better health care benefits as a way of improving their jobs. Another study indicated that 39 percent of RNs who had been in their current jobs for more than 1 year were dissatisfied with their total compensation, but 48 percent were dissatisfied with the level of recognition they received from their employers.²² AHA recently reported on a survey that found that 57 percent of responding RNs said that their salaries were adequate, compared to 33.4 percent who thought their facility was adequately staffed, and 29.1 percent who said that their hospital administrations listened and responded to their concerns.23

Wages can have a long-term impact on the size of a workforce pool as well as a short-term effect on people's willingness to work. After several years of real earnings growth following the last nursing shortage, RN earnings growth lagged behind the rate of inflation from 1994 through 1997. In 2 of the last 3 years, however, 1998 and 2000, RN earnings growth exceeded the rate of inflation. The cumulative effects of these changes are such that RN



²⁰AHA and The Lewin Group, "The Hospital Workforce Shortage: Immediate and Future," *TrendWatch*, Vol. 3, No. 2 (June 2001).

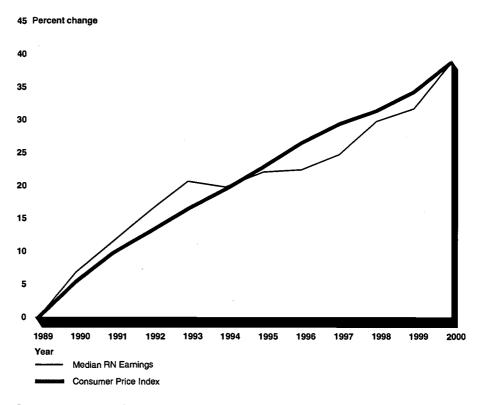
²¹Analysis of American Nurses Association Staffing Survey, 2001.

²²The Nurse Perspective: Drivers of Nurse Job Satisfaction and Turnover, 2000.

²³ The Hospital Workforce Shortage: Immediate and Future," 2001.

earnings have just kept pace with the rate of inflation from 1989 to 2000 as shown in figure 2.

Figure 2: Cumulative Annual Increase in Median RN Earnings and the Consumer Price Index, 1989-2000



Source: GAO analysis of median weekly earnings for RNs employed full-time as reported by the Bureau of Labor Statistics (BLS) using data from the Current Population Survey. Consumer Price Index data for each year represent annual averages as reported by BLS.

Demand for Nurses Will Continue to Grow As the Supply Dwindles A serious shortage of nurses is expected in the future as pressures are exerted on both demand and supply. The future demand for nurses is expected to increase dramatically when the baby boomers reach their 60s, 70s, and beyond. The population age 65 years and older will double between 2000 to 2030. During that same period the number of women between 25 and 54 years of age, who have traditionally formed the core of the nurse workforce, is expected to remain relatively unchanged. This potential mismatch between future supply of and demand for caregivers is



illustrated by the change in the expected ratio of potential care providers to potential care recipients. As shown in figure 3, the ratio of the working-age population, age 18 to 64, to the population over age 85 will decline from 39.5 workers for each person 85 and older in 2000, to 22.1 in 2030, and 14.8 in 2040. The ratio of women age 20 to 54, the cohort most likely to be working either as nurses or nurse aides, to the population age 85 and older will decline from 16.1 in 2000 to 8.5 in 2030, and 5.7 in 2040.

Figure 3: Decline in Elderly Support Ratio Expected, 2000 to 2040 45 Workers per person 85 and older 40 35 30 25 20 15 10 5 O 2000 2010 2020 2030 2040 Year Working-age population 18-64 to each person 85 and older Women age 20-54 to each persons 85 and older

Source: GAO analysis of U.S. Census Bureau Projections of Total Resident Population, Middle Series, December 1999.

Unless more young people choose to go into the nursing profession, the nurse workforce will continue to age. By 2010, approximately 40 percent of the workforce will likely be older than 50. By 2020, the total number of full time equivalent RNs is projected to have fallen 20 percent below HRSA's projections of the number of RNs that will be required to meet demand.²⁴



Concluding Observations

Providers' current difficulty recruiting and retaining nurses may worsen as the demand for nurses increases with the aging of the population. Impending demographic changes are widening the gap between the numbers of people needing care and those available to provide it. Moreover, the current high levels of job dissatisfaction among nurses may also play a crucial role in determining the extent of current and future nurse shortages. Efforts undertaken to improve the workplace environment may both reduce the likelihood of nurses leaving the field and encourage more young people to enter the nursing profession. While state governments and providers have begun to address recruitment and retention issues related to the nurse workforce, more detailed data are needed to assist in planning and targeting corrective efforts.

As we agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to interested parties and make copies available to others upon request.

If you or your staff have any questions, please call me on (202)512-7119 or Helene Toiv, Assistant Director, at (202)512-7162. Other major contributors were Eric Anderson, Connie Peebles Barrow, Emily Gamble Gardiner, and Pamela Ruffner.

Sincerely yours,

Janet Heinrich

Director, Health Care—Public Health Issues

Janet Heinrich



Appendix I: Change in RN Employment, per 100,000 Population by State, 1996-2000

	Employed RNs pe		
_	populatio		
State	1996	2000	Percent change 1996-2000
Alabama	756	766	1.3%
Alaska	974	784	-19.5%
Arizona	721	628	-12.9%
Arkansas	683	701	2.6%
California	566	544	-3.9%
Colorado	806	737	-8.6%
Connecticut	1,029	942	-8.5%
Delaware	1,046	936	-10.5%
District of Columbia	1,710	1,675	-2.0%
Florida	800	785	-1.9%
Georgia	712	683	-4.1%
Hawaii	733	703	-4.1%
Idaho	583	636	9.1%
Illinois	863	819	5.1%
Indiana	780	761	-2.4%
Iowa	989	1,060	7.2%
Kansas	806	885	9.8%
Kentucky	748	833	11.4%
Louisiana	718	834	16.2%
Maine	1,053	1,025	-2.7%
Maryland	842	856	1.7%
Massachusetts	1,190	1,194	0.3%
Michigan	816	798	-2.2%
Minnesota	945	957	1.3%
Mississippi	701	750	7.0%
Missouri	932	960	3.0%
Montana	771	812	5.3%
Nebraska	925	958	3.6%
Nevada	580	520	-10.3%
New Hampshire	985	916	-7.0%
New Jersey	844	800	-5.2%
New Mexico	663	656	-1.1%
New York	911	843	-7.5%
North Carolina	794	858	8.1%
North Dakota	1,072	1,096	2.2%
Ohio	893	882	-1.2%
Oklahoma	581	635	9.3%
Oregon	791	793	0.3%
Pennsylvania	1,019	1,010	-0.9%
Rhode Island	1,128	1,101	-2.4%



Appendix I: Change in RN Employment, per 100,000 Population by State, 1996-2000

State	Employed RNs per 100,000 population		
	1996	2000	Percent change 1996-2000
South Carolina	693	728	5.1%
South Dakota	1,059	1,128	6.5%
Tennessee	856	872	1.9%
Texas	629	606	-3.7%
Utah	632	592	-6.3%
Vermont	911	957	5.0%
Virginia	790	711	-10.0%
Washington	776	738	-4.9%
West Virginia	794	858	8.1%
Wisconsin	876	893	1.9%
Wyoming	787	780	-0.9%
United States	798	782	-2.0%

Source: GAO analysis of data from the 1996 and 2000 National Sample Survey of Registered Nurses, HRSA's Bureau of Health Professions, Division of Nursing.



Ordering Information

The first copy of each GAO report is free. Additional copies of reports are \$2 each. A check or money order should be made out to the Superintendent of Documents. VISA and MasterCard credit cards are also accepted.

Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

U.S. General Accounting Office P.O. Box 37050 Washington, DC 20013

Orders by visiting:

Room 1100 700 4th St., NW (corner of 4th and G Sts. NW) Washington, DC 20013

Orders by phone:

(202) 512-6000 fax: (202) 512-6061 TDD (202) 512-2537

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

Orders by Internet

For information on how to access GAO reports on the Internet, send an e-mail message with "info" in the body to:

Info@www.gao.gov

or visit GAO's World Wide Web home page at:

http://www.gao.gov

To Report Fraud, Waste, and Abuse in Federal Programs

Contact one:

- Web site: http://www.gao.gov/fraudnet/fraudnet.htm
- E-mail: fraudnet@gao.gov
- 1-800-424-5454 (automated answering system)



PRINTED ON RECYCLED PAPER



U.S. Department of Education

Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)



NOTICE

Reproduction Basis

This document is covered by a signed "Reproduction Release
(Blanket)" form (on file within the ERIC system), encompassing all
or classes of documents from its source organization and, therefore,
does not require a "Specific Document" Release form.



This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

EFF-089 (3/2000)

